NOAA Research in Utah

UT-1 through 3 (Statewide)

Climate and Global Change Program

NOAA is responsible for providing climate information to the nation in order to prepare and protect climate sensitive sectors of society and the economy. To carry out this mission, NOAA's Climate and Global Change Program conducts focused scientific research to understand and predict variations of climate. The program is comprised of a number of research elements, each focusing on a specific aspect of climate variability. Taken together, this research contributes to improved predictions and assessments of the effects of climate variability and change on different environments over a continuum of time scales from season to season, year to year, and over the course of a decade and beyond. This research is accomplished through the strong support of the academic and private sectors, as well as NOAA and other federal laboratories. In FY 2001, NOAA's Climate and Global Change Program provided approximately $157,300 in support of climate research in the State of Utah. For more information please visit http://www.ogp.noaa.gov

UT-1 through 3 (Statewide)

Climate Diagnostics Center
Climate Research

NOAA's Climate Diagnostics Center (CDC), in collaboration with scientists at the University of Utah, is providing experimental long-lead-time forecasting support for the Winter Olympics in Salt Lake City. CDC also works in collaboration with university social scientists to investigate the process of how climate information and products are being used or could be used by Utah water resource managers to provide NOAA with a knowledge base for enhanced decision support. CDC has prepared climate-briefing documents and provided online demonstrations of climate products to the Central Utah Water Conservancy District, Davis County Water, Salt Lake City Public Works, Utah Fish and Wildlife, and representatives of the Navajo tribe. CDC scientists are also working with U.S. Bureau of Reclamation reservoir managers in the state to develop ways to use climate information in reservoir management. In support of these projects, CDC has developed a web site with links to regional climate resources at http://www.cdc.noaa.gov/ClimateInfo

UT-1 through 3 (Salt Lake City Valley)

Air Resources Laboratory
Air Quality Research

The Atmospheric Turbulence and Diffusion Division of NOAA's Air Resources Laboratory collaborates in the Department of Energy's (DOE) Vertical Transport and Mixing Experiment to

better understand air pollution transport and dispersion in the complex wind flows over the Salt Lake City Valley. This work is part of a four-year, $12 million effort sponsored by DOE's Office of Biological and Environmental Research.

UT- 1 (Salt Lake City)

Air Resources Laboratory
Integrated Surface Irradiance Study

Solar radiation is the driving energy for the geophysical and biochemical processes that control weather and life on earth, so understanding the global surface energy budget is key to understanding climate. Because it is impractical to cover the earth with monitoring stations, the answer to global coverage lies in reliable satellite-based estimates. Accurate and precise ground-based measurements in differing climatic regions are essential to refine and verify the satellite-based estimates, as well as to support specialized research. The Integrated Surface Irradiance Study (ISIS) is a continuation of earlier NOAA surface-based solar monitoring programs in the visible and ultraviolet wavebands. ISIS provides basic surface radiation data with consistency and accuracy. The Air Resources Laboratory operates the NOAA national broadband solar radiation network, including a station located in Salt Lake City that monitors incoming radiation. For more information please visit http://www.atdd.noaa.gov

UT-1 and 3 (Salt Lake City and Myton)

Forecast Systems Laboratory
GPS Meteorological Observing Systems

NOAA's Forecast Systems Laboratory (FSL) operates a rapidly expanding network of GPS Meteorological (GPS-Met) Observing Systems to monitor the total quantity of precipitable water vapor in the atmosphere. Currently, there are 93 systems over the contiguous 48 states and Alaska, and plans are being made to extend these observations to Hawaii, Puerto Rico, the Caribbean Islands, and Central America. Water vapor is an important but under-observed component of the atmosphere that plays a major role in severe weather events and the global climate system. GPS-Met systems provide accurate water vapor measurements under all weather conditions, including thick cloud cover and precipitation, and do so at very low cost. The network is being developed by FSL in cooperation with federal, state and local government agencies, universities, and the private sector. The GPS stations provide high-accuracy surveying and navigation services for National defense, automated agriculture, safe land and marine transportation, government infrastructure management, and 911 emergency response services. Fortuitously, these systems can also be used for meteorology with the addition of surface weather sensors. GPS-Met systems in Utah are operated by NOAA near Salt Lake City, and by the U.S. Department of Transportation near Myton. For more information please visit http://www.gpsmet.noaa.gov/jsp/index.jsp

For further information about these and other NOAA programs, please contact NOAA's Office of Legislative Affairs at (202) 482-4981.

February 2002